Washington Park Arboretum

BULLETIN

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Washington Park Arboretum

The Arboretum is a 230-acre dynamic garden of trees and shrubs, displaying internationally renowned collections of oaks, conifers, camellias, Japanese and other maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle's largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington Botanic Gardens and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

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ABOVE: The Kashmir rowan (*Sorbus cashmiriana*) blooming in the *Sorbus* Collection at Washington Park Arboretum in mid-May. (Photo by Niall Dunne)

ON THE COVER: *Malus* x *adstringens* blooming in Crabapple Meadow in mid-April. (Photo by Niall Dunne)

Taking Stock

This Seattle winter has been the mildest in memory. Who ever dreamed of seeing so many cherries and magnolias in bloom in February? Too bad that we will mostly likely be paying for the sunshine and warmth with drought this summer, but, my, it has been a lovely respite.

As we ready for the rush of spring activities, I like to take stock of where we are and where we are going. Our volunteers and staff are all recuperating from another successful Opening Night Party at the Flower & Garden Show, and from the work of putting together (and taking apart) our display garden, "Picture Yourself on Azalea Way." My favorite moment at the Party was seeing our guests eagerly contributing to support our volunteer programs and celebrating our dedicated volunteers. A large matching gift was given in honor of Dr. John Wott. We surprised him, and he was overwhelmed!

As we look forward, this coming spring and summer promise to be full of change. The work to expand SR 520 is now in full swing at the north end of the Arboretum. The old MOHAI building already is just a memory. The Ramps to Nowhere are disappearing, piece by piece. By summer the construction on the new Arboretum Loop Trail will have begun (see the article on p. 19). More construction is going on here than at any time since the days of the WPA. Pardon our dust! It will be a challenge for the next two years. Our reward will be that some previously soggy, mucky parts of the Arboretum soon will be easy to explore.

At the Foundation, our Stewards Program will be changing, too. With the program approaching four years of age, our founding Stewards coordinator, Rhonda Bush, is ready to pass on the responsibility to someone new. Rhonda has done an extraordinary job of translating our vision of a dedicated volunteer stewards group into a reality—recruiting, training, mentoring, inspiring, and working alongside a dedicated corps of volunteers. She has made it so rewarding and so much fun to work together. Bravo, Rhonda. Thank you for your dedication and skill. Well done!

And, personally, I look forward to so much: a new grandchild this spring and a wedding this summer at the Seattle Chinese Garden. I am thrilled to be marrying my first love, whom I met when I was a senior in high school. Lucky us! It will be a rich and busy year.

Cheers,

Paige Miller

Paige Miller, Executive Director,
Arboretum Foundation

P.S. FlorAbundance, our spring plant extravaganza, will be at Magnuson Park April 25–26 with a members-only pre-sale party on April 24. It's not to be missed!

Rhonda Bush (top) and the Garden Stewards helping to plant the New Zealand Forest in 2013.

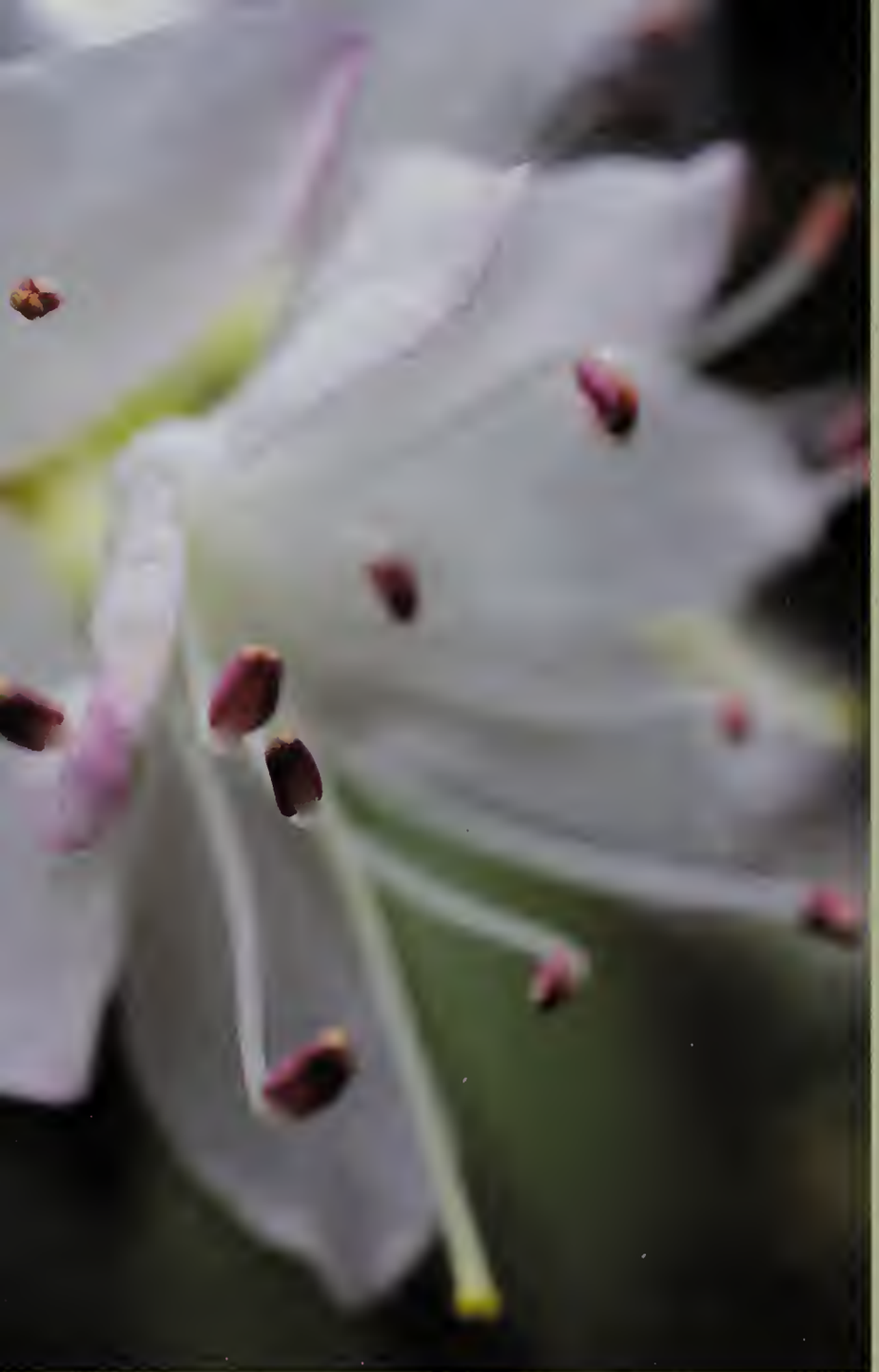
OFF THE BEATEN PATH:
Hidden Treasures of the Arboretum

Rough-Leaved Rhododendron

Text and Photos by Daniel Mount

There are over 1000 *Rhododendron* species in the world. Though populations can be found in the Caucasus Mountains and Southern Europe, in the Appalachian Mountains, and on the West Coast of North America, by far the majority of rhododendrons are found in the Eastern Himalayas and on the Malay Archipelago. In its database, UW Botanic Gardens lists well over 1800 rhododendrons in the Arboretum collection. Nearly half of these are hybrids, but there is also a magnificent representation of species in our collection, too.

ABOVE: The hirsute foliage and beautiful early spring flowers of *Rhododendron scabrifolium*.



One of the newer arrivals in the Arboretum is *Rhododendron scabrifolium*, the rough-leaved rhododendron. The seed of this plant was originally collected as *R. spinuliferum* at 7200 feet between the villages of Midu and Chuxong, along the Old Burma Road in Yunnan, China. They were later discovered—in the refrigerator at the Rhododendron Species Botanical Garden (RSBG) in Federal Way—by Steve Hootman, when he took over curatorship there in 1992. It's unclear how long the seeds were in cold storage, but luckily for us, they germinated readily. And we received one of the plants from RSBG in 1995.

The rough-leaved rhododendron forms dense thickets on rocky slopes under pines and oaks at elevations of 5900 feet to 11000 feet in its native Yunnan. *Rhododendron spinuliferum* and *R. scabrifolium* have overlapping habitats and very similar growth habits and morphologies. In the field, and in seed, they can easily be mistaken for one another. Hootman corrected the misidentification in 2007, and the Arboretum followed suit.

Père Jean Marie Delavay, a French missionary and botanist, introduced the rough-leaved rhododendron to European gardens in 1885, two years after he discovered it. Delavay's contributions to horticulture and botany are legion, and he is commemorated by name in many Northwest garden favorites, like *Osmanthus delavayi* and *Paeonia delavayi*.

Though the rough-leafed rhododendron is not the showiest of what the Arboretum has to offer of the genus, it is certainly not a mere curiosity. The leathery leaves and very hairy branches are quite interesting in and of themselves. But the early flowers—with lovely pink anthers floating over the silky, white petals —make this plant a treasure.

Our specimen is easy enough to find along the steps leading down from Arboretum Drive into Rhododendron Glen. Small though it is, compared to the behemoths that surround it, you can't miss it when in flower in late March to early April. It spills right onto the path at the top of the second set of stairs descending into the shadows of the glen. ~

Daniel Mount is an estate gardener, garden writer, and member of the "Bulletin" Editorial Board. He lives on a small farm in the Snoqualmie Valley. Read more of his reflections on plants and gardening at www.mountgardens.com.

ABOVE: Close-up of the pink anthers and pink-edged white petals.

Arnold Arboretum, Part 1: The Plants

By Walt Bubelis

I had heard so much about the Arnold Arboretum of Harvard University for years, ever since my undergraduate days, that it was high time to see it for myself. I wasn't disappointed in the least when I finally visited with my wife in mid-April, 2014.

Much had not leafed out yet, but this gave us an opportunity to see the landscape better. The gentle rolling hills were a backdrop as we wandered down one pathway after another. Some of the wide avenues, now used for strolling, were once the province of carriages that Charles Sprague Sargent (1841-1927), the first director of the Arboretum, set up for visitors so that they could view the collections without having to step outside!

A sunny day enhanced my first impressions of the place. We entered by the Forest Hills Gate (one of five gates accessible to visitors), where the cherries and plums were in full blossom. The rose family members here, including chokecherries and quince, all seemed disease free—perhaps a sign that they appreciated the warmer summer temperatures of New England.

My wife and I had taken the train out to the Arboretum Station, an easy 20-minute journey from the Back Bay area, just to the west of

ABOVE: The rosy-striped, white blossoms of *Magnolia amoena*. (Photo by Walt Bubelis)

downtown Boston. The Arboretum is long and narrow, though still wide enough that you can't see the whole way across it. As you approach the Hunnewell Visitor Center, you come across impressive specimens of trees planted in the late 19th century. Most were grown from seed and showed varying degrees of health after a century and more.

Century-Old Collection Trees

Established in 1872, the Arnold Arboretum was designed by Frederick Law Olmsted as part of the City of Boston's wonderful "Emerald Necklace," a seven-mile long set of parks and parkways starting in the oldest portion of the city, the Boston Common. It was named for James Arnold, a whaling merchant who donated a large part of the land to Harvard. The site of the Arboretum that greeted Sargent in 1873 was one of thickets, wet meadows and a marsh. A solitary grove of hemlocks (still there today) was all that remained of the forests that had been cleared from the area in the 1700s. Sargent worked hand-in-glove with Olmsted, designing the roadways and paths around the eventual plant groupings that we see today.

Within the Arnold Arboretum's 265 acres, more than 15000 specimens, representing some 4155 different taxa (as of 2012), can be found. The original intent was to install plants that could be grown in southern New England. This concept has since been expanded to reflect a broader horticultural mission that includes the conservation of rare and endangered plants and the introduction of new plants.

Since the early days of the Arboretum, there has been a strong emphasis upon displaying plants of eastern Asia and eastern North America and showing their relationships. In addition to focusing on these regional floras, core collection goals include developing and maintaining genera such as *Acer* (maples), *Carya* (hickories), *Fagus* (beech), *Stewartia, Syringa* (lilac) and *Taxus* (yews).

Many of the early staff members' plant introductions are still maintained today, though full documentation may be lacking. It is this historical tie that I consider to be one of the many appealing qualities of the Arnold Arboretum. (See "The Arnold Arboretum, Part 2: The Plant Explorers," in the upcoming 2015 summer issue of "The Bulletin".)

Some examples of the early-day plantings stand out now due to their great dimensions. On the main walk near the visitor center, for example, you can see a sizeable silver maple (*Acer saccharinum**) dating from 1881. Other plants from the 19th century include a Kentucky coffee tree (*Gymnocladus dioica**) from 1872 and a honey locust (*Gleditsia triacanthos**) from 1881. The Kentucky coffee tree's stout, six-inch-long seed pods are a distinctive feature of this member of the pea family. The tree is not often seen in gardens but is worth consideration because of its often rugged winter outline and the large, twice- to thrice-divided leaves.

More common to the Pacific Northwest are cultivars of the honey locust, with its smaller, once- to twice-divided leaves and longer, more slender seed pods. When I first saw the fallen seed pods under a street tree, I thought they looked like discarded leather belts that had been cut in half. The straight species is not desired in ornamental plantings due to the large, multi-branched "thorns" that can erupt over all the bark. These "thorns" are actually reduced side branches that grow so thick on the trunk that you cannot touch the bark itself. They may be a defensive mechanism to ward off animals that might browse on the bark. Seeds of the honey locust are known to be sweet and were often fed to hogs in the South during the Great Depression. During that period, and earlier times, dried seeds of both honey locust and Kentucky coffee bean were used as a coffee substitute.

Other examples of century-old native species at the Arnold include *Cladrastis kentukea** (yellowwood, dating from 1881), *Hamamelis virginiana** (common witchhazel, 1883), *Juglans nigra** (black walnut, 1893), *Liriodendron tulipifera** (tulip tree, 1894), *Magnolia acuminata** (cucumber magnolia, 1880), *Ostrya virginiana** (American hophornbeam, 1873) and *Sassafras albidum** (sassafras, 1884).

*—at the Washington Park Arboretum

Procuring Asiatic species in the 1800s took a bit more effort. Nevertheless, some older examples include *Lindera obtusiloba* var. *obtusiloba** (Japanesespicebush,1892), *Symplocos paniculata* (sapphireberry, 1897) and *Syringa reticulata** (Japanese tree lilac, 1876).

Amur Corktree, Lilacs and More

One tree I always admire when coming across it is the Amur corktree (*Phellodendron amurense*). Planted in 1882, the Arnold Arboretum's specimen shows to good effect the species' corrugated bark, which resembles that of the cork oak (*Quercus suber**), from which most commercial cork is harvested. The two corks are unrelated, however; the Amur corktree belongs to the citrus family (Rutaceace) rather than the oak family (Fagaceae). Bruising either the plant's pinnate leaves or its small, round, bluish-black fruits releases a citrusy scent that brings to mind the family relationship. The Arnold's current tree is actually a grafted specimen from an earlier tree that was planted in 1874 and raised from seed procured from the Imperial Garden of St.

ABOVE: An enormous silver maple (*Acer saccharinum*), dating from 1881. (Photo by Walt Bubelis)

Lilac Sunday in the Arnold Arboretum.
(Photo by John Phelan/Wikipedia Commons)

Petersburg, Russia. Unfortunately, the Amur cork tree has become invasive in parks and natural areas in some northeastern states, where it was planted as an ornamental.

We were there too early to see the lilacs in bloom. It has been a long-standing tradition at the Arnold Arboretum to invite the public to enjoy the lilacs at their peak of beauty and fragrance, typically mid-to-late May. Bostonians look forward to Lilac Sunday, the only day of the year the public is allowed to picnic on the grounds. In addition to the 80-plus cultivars of the common lilac (*Syringa vulgaris**) in the collection, there are numerous other species and hybrids. *Syringa meyeri* (Meyer lilac) and *S. meyeri* var. *spontanea* 'Palibin'* recall Frank Meyer's intrepid collecting in China in the early 20th century. Both plants exhibit somewhat small, rounded leaves and a dense, twiggy growth habit. They grow up to six and five feet tall, respectively. Their four-inch clusters of lavender-white-violet-purple flowers are highly fragrant. When my Palibin lilac blooms in May, its fragrance carries across the width of the garden.

Although Frank Meyer (1875-1918) never worked for the Arnold Arboretum (He was employed by the U.S. Department of Agriculture—and yes, the Meyer lemon, *Citrus* × *meyeri*, was one of his introductions.), he did contribute seeds and cuttings. One plant at the Arnold discovered by Meyer is *Juniperus squamata* 'Meyeri'* (flaky juniper). This large, bold, vase-shaped shrub grows up to 10 feet tall and produces a beautiful bluish cast on rather prickly foliage. Older specimens sport reddish-brown, peeling bark, providing an excellent foil to the foliage.

Sargent's Plants

Charles Sargent was the kingpin behind the exciting surge in plant exploration based out of the Arnold Arboretum in its early years. He collaborated with explorers like Meyer, sent others like Ernst Henry Wilson (1876-1930) out from the Arnold, and even collected sometimes himself.

Among Sargent's introductions were a crabapple (*Malus sargentii**) and a juniper (*Juniperus chinensis* var. *sargentii*). His crabapple, started from seed he collected in Hokkaido in 1892, is still at the Arboretum. This is a lovely, small-growing tree—the smallest species of crabapple—red in the bud stage, then opening to a white, fragrant blossom. The plant grows from six to eight feet tall and twice as wide. It is very disease resistant but does have a tendency for alternate-year blooming. Sargent's juniper has a native range from northern Japan, where Sargent collected seed, to northeastern China. With blue-green foliage extending to two feet in height and

eight feet in width, the plant has proven to be a useful groundcover for sunny sites.

Plants named to honor Sargent include *Cupressus sargentii**, *Viburnum sargentii**, and three introduced by Wilson: *Magnolia sargentiana**, *Sorbus sargentianum** and *Rhododendron sargentianum*. Of these, only the magnolia is to be found at the Arnold. This is a tall deciduous tree with very large, pinkish flowers that usually appear before the new large and long leaves fully emerge. Wilson discovered it in 1903 in scattered locations in the southwestern Chinese provinces of Yunnan and Szechuan. Today, the native plant populations are even more fragmented due to pressures from expanding human populations.

A 70-foot tall specimen of the unusual birch *Betula schmidtii*, planted in 1896. (Photo by Walt Bubelis)

It is only fitting, given how much of the Arnold's specimens derived from Asia, that there is an exchange of plants between China and the Arboretum. I came across *Magnolia amoena**, looking somewhat like a saucer magnolia (*M.* × *soulangeana*) in shape. Its superb rosy-striped, white blossoms caught my eye. The plant tag said it had come from Shanghai Botanic Garden in 1996. Endemic to southeastern China, *Magnolia amoena* is threatened in its home range; the collection of flower buds for medicinal purposes is affecting the regeneration of the plant.

Sargent was proud of introducing the cherry *Prunus sargentii**. Although the plant had been introduced into cultivation in 1890, it remained scarce until Sargent brought back a huge number of seeds from Japan. His staff member Alfred Rehder (see "*Rehderodendron macrocarpum*," page 22) named the plant in his honor in 1913. A small tree growing up to 25 feet tall, it takes on either a vase or rounded shape. The profusion of single, rosy-pink blossoms in spring make it stand out in any landscape. The great English authority on ornamental cherries, Collingwood "Cherry" Ingram, was enthralled by the sight of this blooming on the slopes of Mount Fuji and pronounced it the loveliest of cherries. More common today in gardens is the compact hybrid *P.* 'Accolade'*, a cross between *P. sargentii* and *P. subhirtella**. It, too, is a lovely plant, boasting a great profusion of soft-pink, semi-double blossoms. The Arnold has specimens of *P. sargentii* (one dating back to 1928) and *P.* 'Accolade', as well as *P. sargentii* 'Columnaris', an upright form of the species, with narrow, vase-shaped branching.

Corylopsis, Dove Tree, Betula and More

Another notable figure in the history of the Arnold Arboretum was John G. Jack. A popular educator at the institution for four decades, he did get out occasionally to do some plant collecting. On one trip to the western U.S. and Canada, he and Alfred Rehder brought back the dwarf Alberta spruce (*Picea glauca* 'Conica'*), the

ever-common, tabletop holiday plant. Another significant trip was to the Far East in 1905. From Japan, Jack brought back the fragrant winterhazel (*Corylopsis glabrescens**). If you have a winterhazel at all, chances are it's the smallest of the tribe, *Corylopsis pauciflora**, which takes its time to reach five feet tall. *Corylopsis glabrescens* can reach 15 feet in height. (The Arnold's oldest living specimen was propagated from seed sent by the Washington Park Arboretum in 1977.) Wilson collected an even larger grower in Hubei, China, in 1907 —Veitch's winter hazel, *C. veitchiana*. All winterhazels bear light-yellow flowers in pendulous racemes in late winter with varying degrees of a spicy fragrance.

Ernest Henry Wilson was by far the biggest contributor of plants to the Arnold. It wasn't just due to his four extensive collecting expeditions for the Arnold but also his encyclopedic memory, which he used to great effect in determining whether something was new and worth collecting or not. Wilson introduced over 1000 new plants into cultivation and is credited with bringing the flora and culture of eastern Asia to widespread interest in the West.

On his first trip to China for the Arnold, Wilson brought back seeds of *Magnolia dawsoniana**, which was named for then-superintendent of the Arboretum, Jackson T. Dawson. A deciduous tree typically growing up to 60 feet tall, it blooms before the leaves emerge with large, white to rosy-red fragrant flowers.

The plant that Wilson is most famously associated with is the dove tree (*Davidia involucrata**). He first collected seed in 1902, while exploring in China on behalf of the Veitch Nurseries of England. Patience is required for cultivation of the dove tree because it can take 10 years or more for seedlings of the plant to flower. When the dove tree finally blooms, you can see why it's well worth the wait: Large white elongated bracts hang down from the globe shaped flower, looking like doves in flight. Wilson had this to say about them: "The flowers and their attendant bracts are pendulous on fairly long stalks, and when stirred by the slightest breeze they resemble huge butterflies hovering amongst the trees."

Interestingly, the Arnold's oldest and best specimen—a 30-foot high, multi-stemmed beauty—was propagated from a seed collection that predated Wilson's more famous expedition. In 1897, French missionary and plant explorer Père Paul Guillaume Farges sent 37 seeds of the tree to the arboretum of Maurice de Vilmorin in Les Barres, France. From these seeds, one plant successfully germinated. Sargent obtained a cutting of it in 1904 and planted it at the Arnold. (Seed from the plants grown at the Veitch Nurseries didn't become available until 1911.) Its scientific name is actually *Davidia involucrata* var. *vilmoriniana**, and it differs from the straight species by having smooth rather than felted leaves. Whatever the name, credit for introducing the dove tree to the West resides with Farges—though Wilson played a key role in its large-scale distribution.

Wilson became known affectionately as "Chinese Wilson" for his record number of Asiatic introductions. He even played upon this nickname when coining the genus name for his introduction *Sinowilsonia henryi**. This member of the witch-hazel family (Hamamelidaceae) is not often seen in gardens. Looking much like a large witch-hazel in its vase shape and foliage, the plant produces long, pendent racemes of green flowers in May that distinguish it from its familial relatives.

ABOVE: The distinctive flower and bracts of the dove tree. (Photo by Niall Dunne)

Final Impressions

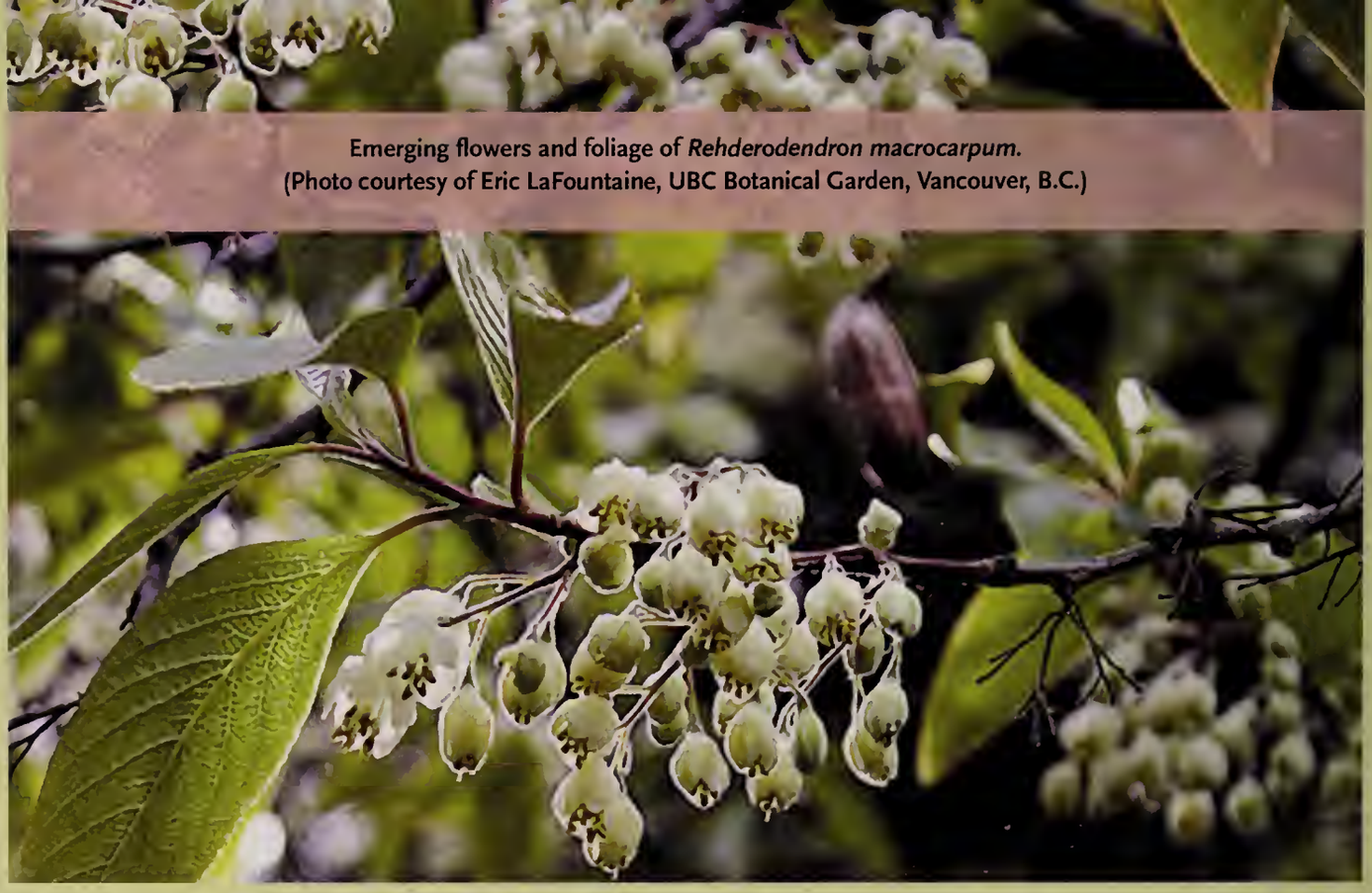
I'm always a sucker for the unusual, so I just had to inspect the attractive, shaggy bark of an unfamiliar birch, which turned out to be *Betula schmidtii**. Later research revealed it to be a fast grower, getting up to 95 feet tall—but, strangely, even with such a fast growth rate, its wood is too dense to float on water. Fall color is said to be a distinctive deep tone of yellow. The Arnold's specimen was planted in 1896 from seed sent by the Imperial Botanical Gardens in Tokyo, Japan, and it has grown to over 70 feet tall.

The last plant that caught my eye that day was an evergreen shrub that I had read about but hadn't yet seen. Who wouldn't want to see a plant with the name of devilwood (*Osmanthus americanus**)? Native to Florida and the Gulf Coast region, this shrubby tree has managed to reach 25 feet growing in Boston. With long, smooth, green leaves, it reminded me of its Chinese and Japanese relative, *Osmanthus fragrans**—though the latter plant is not truly hardy in the Pacific Northwest. Devilwood, or wild olive (a fitting name since it is in the olive family, Oleaceae), is hardy to USDA Zones 6 to 9. Small, fragrant white flowers appear on the plant in late winter, as they do on other members of the genus.

One day in the Arboretum is not enough to do it justice. Like most arboreta of today, the Arnold offers a variety of opportunities—from the study of individual plants to animal sightings (I saw birds, snakes and turtles on a sunny spring day.) to the enjoyment of the colors and textures of artfully constructed plant groupings.

The long reign and vision of C.S. Sargent, his staff and collectors helped immensely to open wide the doors to the Asiatic flora and create one of North America's iconic public gardens. Do visit—you won't be disappointed!

Walt Bubelis is a professor emeritus in the horticulture department at Edmonds Community College. He is also a member of the "Bulletin" Editorial Board.



Emerging flowers and foliage of *Rehderodendron macrocarpum*.
(Photo courtesy of Eric LaFountaine, UBC Botanical Garden, Vancouver, B.C.)

Rehderodendron macrocarpum Difficult to Pronounce, Lovely to Behold

By Janine Anderson

Although *Rehderodendron macrocarpum* is an upright tree, I first stumbled upon it one frosty January day, while looking at the ground in the vicinity of the Witt Winter Garden. Lying there were some of the most intriguing fruits I've encountered in Washington Park Arboretum. In fact, it was only several springs later that I realized the tree from which they fell had other equally splendid, garden-worthy attributes.

The Plant at a Glance

Rehderodendron macrocarpum is a small deciduous tree reaching approximately 30 feet tall at maturity. It is native to southwestern China and northern Vietnam, where it grows in mountain woodlands at elevations of about 3000 to 5000 feet. It is a member of the styrax family (Styracaceae) and in May bears fragrant, cup-shaped, creamy-white flowers similar to those of Japanese snowbells, such as *Styrax japonicus* and *Styrax obassia*. It is hardy in USDA Zones 8 through 10, so should be fully hardy throughout Western Washington.

I discovered the flowers only incidentally one May, while preparing to tour the Arboretum with a group of landscape design colleagues. The citrusy-scented blossoms were at their peak, and suddenly I realized other specimens of *Rehderodendron macrocarpum* were scattered along the north-south corridor of the park. Racemes of six to 10 five-petaled flowers with prominent yellow anthers emerge in late spring along with the foliage. The plant's alternate, elliptic, finely toothed, dark-green leaves grow three to four inches long and tint attractively with orange and red in fall. Stems, veins and young shoots are colored a lovely pinkish red.

What About Those Fruits?

The flowers of *Rehderodendron macrocarpum* are followed by pendulous, cylindrical fruits that start out green, then turn red. The fruits each have eight to 10 ribs and grow up to three inches long.

LEFT: Fall foliage of *Rehderodendron macrocarpum*. (Photo by Harold Greer)
RIGHT: Fallen fruit of *Rehderodendron macrocarpum*. (Photo courtesy of Trewithen Gardens, Cornwall, United Kingdom)

The outer coating has a woody texture and turns brown after the fruit has fallen from the tree.

The Arboretum Specimens

Rehderodendron macrocarpum has been known in the West only since 1930, and many of the nine Arboretum specimens are descended from seed collected in China in 1934 by Harvard University's Arnold Arboretum. The eldest of these specimens is located in Rhododendron Glen and dates back to 1938. Two more joined the collection in 1955; both are in the vicinity of the Winter Garden. Another three, from the Rhododendron Species Botanical Garden, were added in 2007 and straddle Azalea Way from north of the Winter Garden to south of the trail leading to Loderi Valley. The ninth specimen is a mystery in terms of its origin, but it is easily found just above the wall that borders the parking lot along Arboretum Drive near Rhododendron Glen.

Landscape Value

Rehderodendron macrocarpum is an ideal tree for a woodland garden, preferring as it does humus-rich, well-drained, moist, neutral-to-acid soil and full sun to partial shade. The "Hillier Manual of Trees & Shrubs" (sixth edition) considers it "a magnificent species, in garden merit equal to the best *Styrax*." Sadly, it is difficult to find commercially, possibly owing to the lack of viable seed. The only relatively local source I was able to find for the plant is Greer Gardens in Eugene, Oregon. But if you're interested in *Rehderodendron macrocarpum*, you might consider asking specialty growers at the Arboretum Foundation's FlorAbundance plant sale in April if they propagate it.

The tree is indeed a "sleeper" that should be more widely available and planted. I will never forget my first encounter with the fruit, nor will our small group of landscape designers forget the plant's heavenly scent in May. Because it was discovered on Mount Omei in the Sichuan province, there's a good chance it will be included in the China Forest that's planned for the Pacific Connections Garden. (The flora of Mount Omei will feature strongly in the future forest.)

In the meantime, just follow your nose when you visit the Arboretum in late May... You're in for a treat!

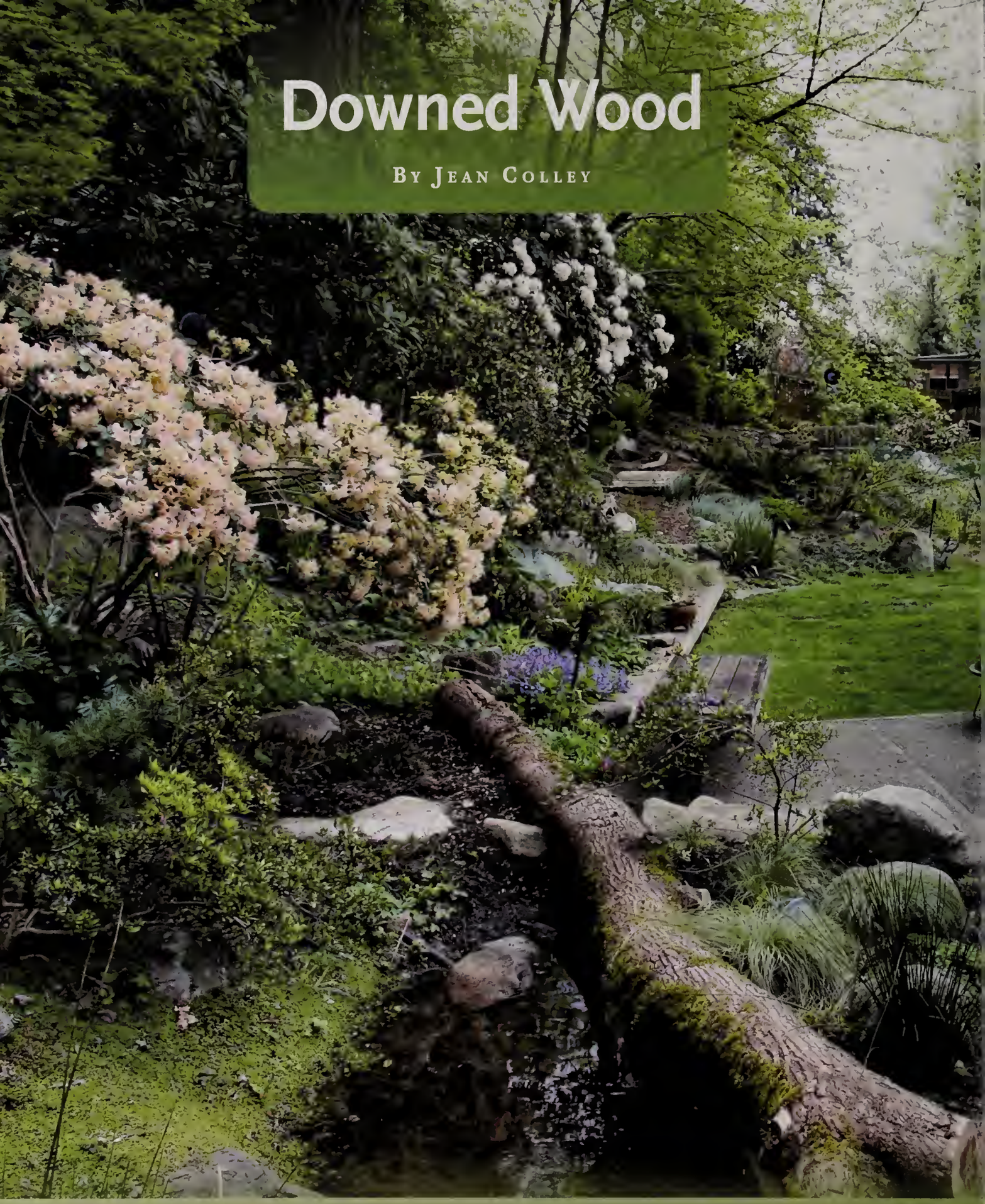
Janine Anderson, CPH, is an award-winning, Pacific Northwest-based landscape designer (www.anderson-design.net), garden writer, speaker, and member of the "Bulletin" Editorial Board.

What's in the Name?

Rehderodendron macrocarpum was one of more than 60 plant taxa named for Alfred Rehder, a long-time Arnold Arboretum botanist and Harvard University professor. Rehder was not in China in 1934 when the Arnold Arboretum's seeds of the plant were originally collected; he would have turned 69 years old that year. Still, it must be gratifying to have a genus of nine lovely species dedicated in your honor. Single species named after Rehder include *Cotoneaster rehderi* and *Clematis rehderiana*. As for the rest of the name of our featured plant, the suffix of the genus name, *dendron*, is Greek for "tree"; *macro* refers to "large size"; and *carpum* means "fruited"—and these combine to form an epithet appropriate for the tree's impressive fruit.

Downed Wood

By Jean Colley



A bigleaf maple trunk creates a natural-looking edge for a pond adjacent to the author's patio. (Photo by Jean Colley)

For too many seasons, my husband Peter and I devoted substantial effort to keeping our woodland garden—starring three mature Douglas firs, a western hemlock and a bigleaf maple—overly tidy. In our dogged pursuit of a spic-and-span landscape, we sent branches, twigs and even whole trees to the chipper-shredder.

However, as time went on, I began to see those twigs, branches and trunks in a new light. Such "downed wood" could be a handy material to create the nooks and crannies for plants that make a garden more interesting. Bigger pieces could become focal points in the landscape.

My relationship with downed wood got serious the day our gardener and I rolled, inch by inch, a 15-foot-long section of a bigleaf maple trunk into the back yard. The trunk, almost a foot in diameter, weighed close to 500 pounds and came from the gardener's Kitsap Peninsula acreage. We got it situated so that it created a horizontal and natural-looking edge for the waterfall and pond adjacent to our patio. It was a thing of beauty.

Downed wood is eventually dead wood, but it's also part of nature's food chain. Gardeners, with more knowledge than I, pointed out that—as organic matter—downed wood adds biomass to the garden, enriching the soil as it decays. Over six years, I have watched my 15-foot maple trunk next to the patio segue into a nurse log, sprouting ferns and mosses and a thrilling crop of "turkey tails" (the mushroom *Trametes versicolor*).

What the Arboretum Does With Downed Wood

I recently talked to Chris Watson, arborist for Washington Park Arboretum, about downed wood in the landscape. It's good stuff, for a lot of reasons, he agreed. In the Arboretum, prunings of large trees (16- to 20-foot pieces) are being used more and more to line trails, curtail erosion, and mark off planting areas.

"Sometimes, when they fit our esthetic, we leave pieces where they grew or fell," Watson said. "We also will leave downed wood as a habitat feature. It will become home to bugs and grubs. As it breaks down, little holes and crevices are used by animals and birds. Woodpeckers, in particular, love dead wood.

"The more of that we leave, the better. At the Arboretum, we are a refuge. Wildlife is part of what draws people here and what they enjoy. So we manage for wildlife."

Turkey tail mushrooms sprouting from a nurse log. (Photo by Jean Colley)

A nurse log lining a trail in the Woodland Garden at Washington Park Arboretum. (Photo by Niall Dunne)

Although saving and reusing downed wood is hardly a new idea in parks, many home gardeners—for a variety of reasons—still have trees and large branches cut up and hauled away, rather than leaving some behind as habitat.

"If you compare the pristine residential garden with the native forest where needles fall, trees fall, and everything is left in place, the forest is a different place. The nutrients stay in place," Watson said. "But at home we rake up our leaves, cut up and haul out our trees and branches. Then we spend money on compost, which is essentially downed wood."

From Parks to Gardens, Logs to Snags

I'm a big fan of the 65-acre Wetlands and Uplands Habitat Restoration in Magnuson Park in Seattle, completed just a few years ago. I especially love the huge logs scattered throughout the site.

Jason Henry, a principal at the Berger Partnership—the Seattle-based landscape architecture and urban design firm that created the plans for Magnuson Park, and whose clients also include the Arboretum—chatted with me recently about downed wood.

"Using wood from trees in the landscape is as local as you can get. Material reuse makes perfect sense, particularly on park sites," he said. "On those sites, every time there's a storm, large branches and whole trees come down; one of our techniques is to reuse that downed wood as snags or nurse logs in the landscape."

Henry is encountering more landscape clients who want to be involved in restoration or in creating an ecologically sound landscape. "They want to do the right thing, but they don't all know what to do," he said.

Because of issues of scale and esthetics, not every garden "needs" a snag (defined as a standing, dead or dying tree) or a nurse log, he noted. A garden of small perennials might not be enhanced with such additions.

But everyone can participate at some level. Gardeners have long used willow branches to make small-scale fences. On the Union Bay Wildlife Area, students repurposed dead blackberry vines to create fanciful wreathes and other pieces of "art" for bird and insect habitat. Gardeners can save a piece of wood from a tree and create a bench or even a table. Or they can employ downed wood to denote an event or make a cultural connection.

Henry told of a client whose shoreside willow was dying. It had been a landmark tree on Lake

A snag created for the wetlands of Magnuson Park, Seattle. (Photo by Jean Colley)

Washington for some 70 years, and the client and many others had fond memories of it serving as a way-finding marker. Too, a rope swing in the tree provided decades of fun for his family and friends.

Rather than simply cutting down the tree and grinding it into wood chips, Henry created a snag out it. It still stands, a vivid reminder of the site's history, and it continues to provide habitat for birds. Just recently a visitor spotted a kingfisher perched on a side branch. "Any tree tied to the culture of a place has the opportunity to be remembered through repurposing," Henry commented.

Gardeners, generally practical people, should also remember that it is usually much easier to leave a large log in place rather than cut it out and haul it away.

"The more you can make use of the woody stuff in your garden, the better off you are going to be," Henry said. "Every aspect of your wood has the potential to become habitat and improve the garden."

Using Downed Wood and Creating Snags

Wood does decay, so using downed wood in the landscape means that in 10 to 20 years it will become immersed in the landscape, and eventually it will disappear.

Among our local natives, Western red cedar (*Thuja plicata*) is the most naturally resistant to decay, but Douglas firs (*Pseudotsuga menziesii*) and Western hemlock (*Tsuga heterophylla*) are also slow to subside. According to Watson of the Arboretum, madronas (*Arbutus menziesii*) have the ability to stand dead for years and make great snags. Poplars and willows will probably rot out sooner rather than later, but are still suited for use as downed wood. "You do need to be careful they don't start sprouting and spread," Watson cautioned.

Dead alders tend to create snags themselves in that they break apart easily. For this reason they shouldn't be left standing in the home garden. Our native bigleaf maples decay pretty easily. The huge sugar maple trunk we left in place after the tree crashed down our hillside in September 2013 is shrinking noticeably. (See "Tree Down," by Jean Colley; "Washington Park Arboretum Bulletin," Fall 2014.)

When creating a snag from a dead or dying tree in a park or garden, arborists customarily remove large branches that could eventually become unstable and tumble down. Arboretum

Holes made by a pileated woodpecker on a snag at the north end of Azalea Way, Washington Park Arboretum. (Photo by Niall Dunne)

arborists regularly monitor snags and remove them if the trees seem at risk of falling. When the arborists leave a snag, they'll leave it short enough so that if it does fall, it won't hit anything sensitive nearby—such as a trail, bench, parking lot or building.

If the downed wood came from a tree infected with a fungus like *Verticillium* or *Armillaria*, the Arboretum is leery about using that wood in the landscape again.

"We had a Japanese maple infected with *Verticillium*," remembered Watson. "We chipped it and aged the mulch as long as we could. Do we spread the disease by later using that mulch? I've heard other arborists discuss it, but I'm not sure."

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At the least, gardeners should refrain from using downed wood near trees like Japanese maples known to be susceptible to fungal diseases, since any downed wood in the Northwest will inevitably harbor fungi and insects.

Pruning Dead Wood for Wildlife

A grove of native conifers—Douglas fir, hemlock and western cedar—grows at the north end of Azalea Way in the Arboretum, right across the road from the Graham Visitors Center. These trees had not been pruned in quite a while and were thicketed with dead wood. Rather than follow conventional pruning technique and saw off the dead wood at the branch collar, Watson simply broke pieces off by hand. "This stabilizes the remaining wood and removes any hazardous branch pieces that might present a risk to Arboretum visitors," he said, "But it also leaves some dead wood on the tree to create bird and insect habitat."

The practice is somewhat akin to the pruning techniques pioneered by English arborist Neville Fay. An outspoken advocate of "conservation arboriculture," Fay urges his colleagues not to impoverish biodiversity by removing aging or dead trees from the environment.

"Fay is a bit controversial," Watson said. Even when pruning a live branch, Fay argues for leaving part of the branch as a "coronet"—a jagged cut that greatly increases its surface area and allows more decay to proceed. "We don't typically prune with jagged cuts at the Arboretum, except when we are removing a whole tree and leaving a snag," Watson added, "but other people are doing it. They're exploring the options to see what they can do to create more niches and attract more wildlife."

Meanwhile, back on my patio, my nurse log is slowly collapsing. But it's also getting a good workout this winter as birds forage it every day, looking for grubs and bugs.

Jean Colley, an editor and writer, is a member of the board of directors of the Friends of Yesler Swamp.

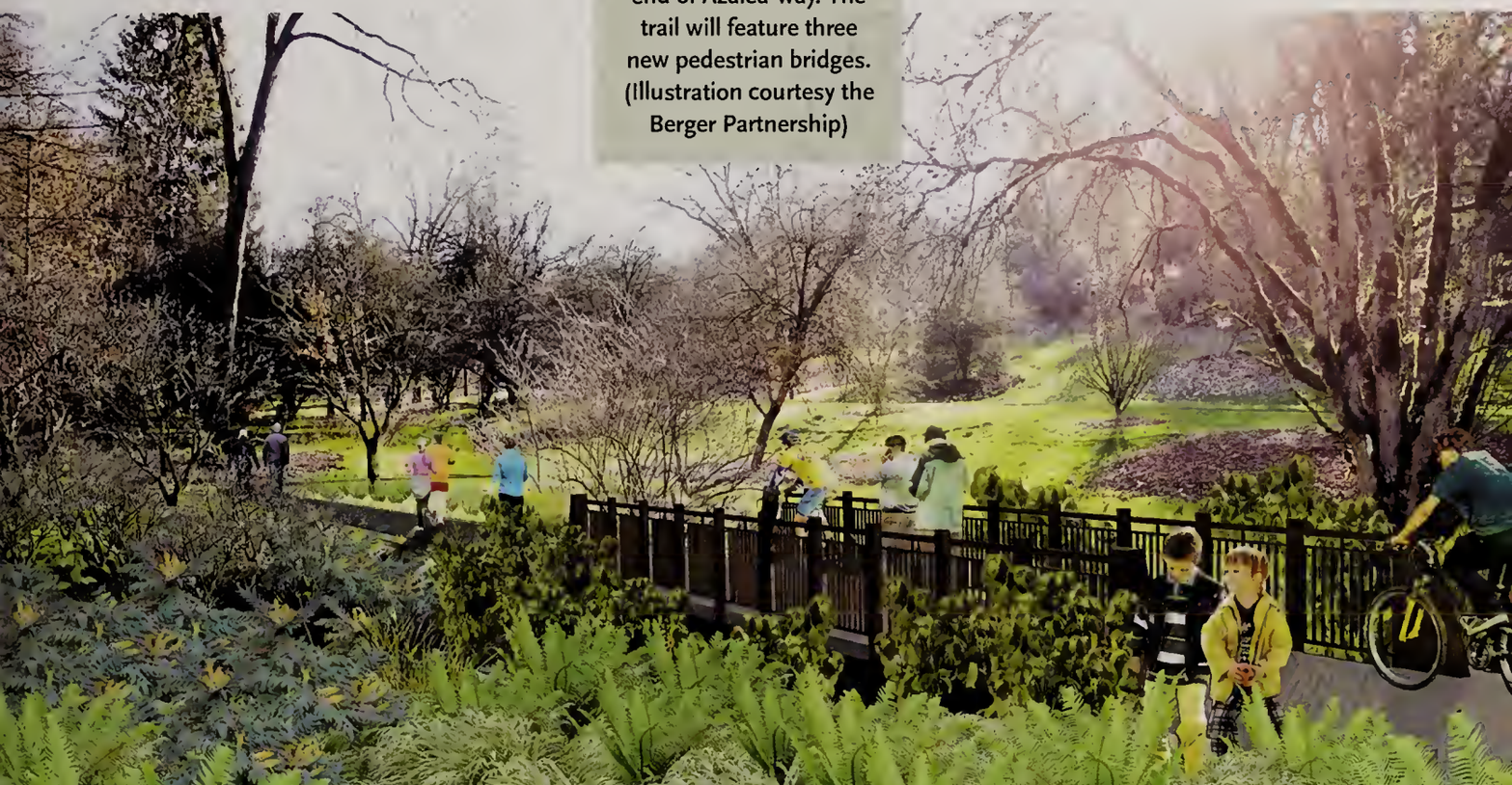
Implementing the Arboretum Loop Trail

By Andy Mitton

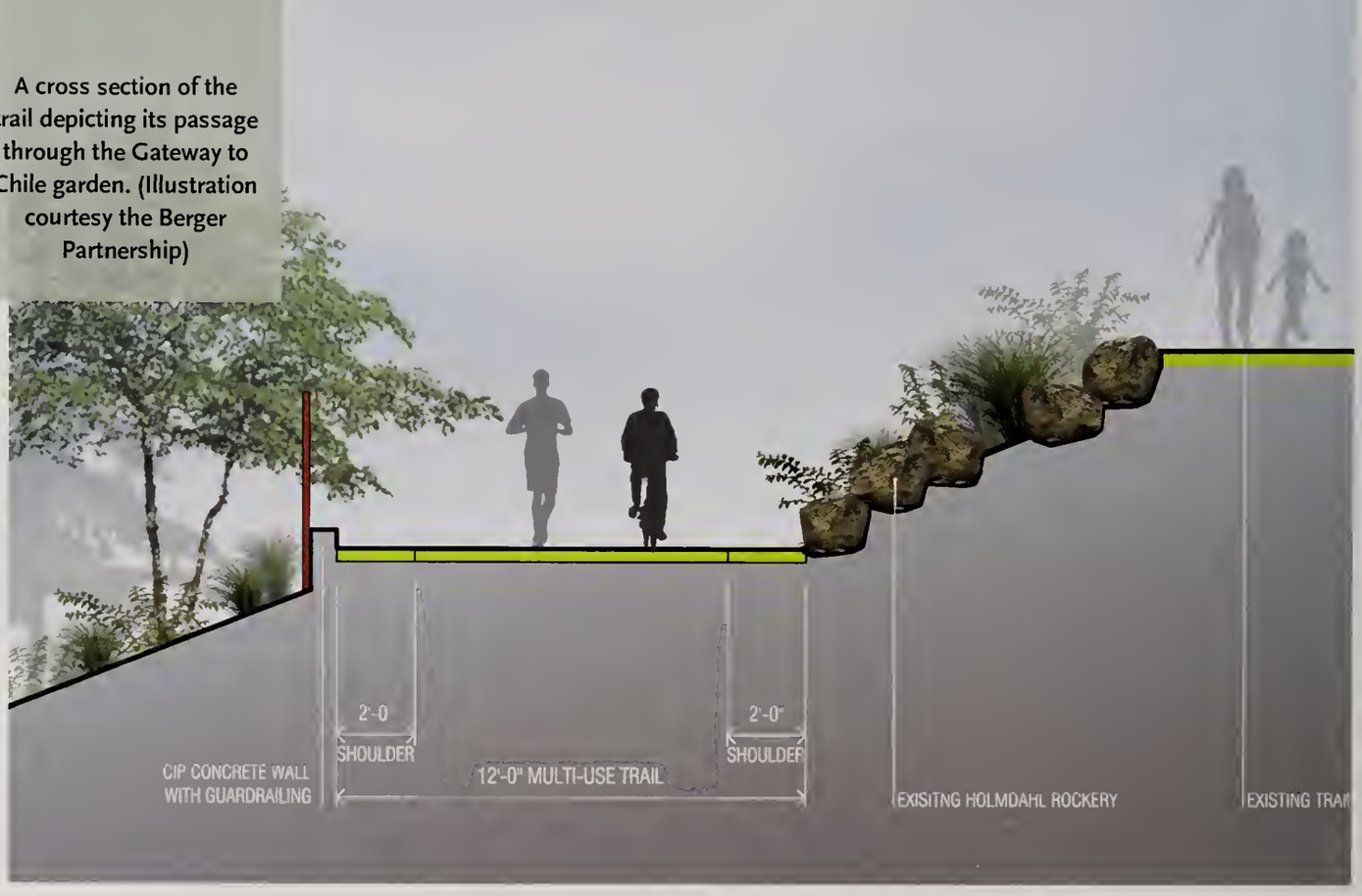
Washington Park Arboretum is currently undergoing one of its largest capital construction projects in decades. The project is identified in the Arboretum's 2001 master plan with a squiggly line paralleling Lake Washington Boulevard, and with an arrow pointing toward it that reads: "Multi-use trail—A safer route for recreational bike users." Despite this seemingly simple route depicted on the plan, designing the actual trail project has been anything but straightforward.

Intended for pedestrians and slower-paced cyclists, the trail negotiates important plant collections, seven different environmentally critical areas—including steep hillsides, a creek, wetlands, peat soils and liquefaction zones (soils that lose stability during an earthquake)—historic structures and landscapes, and aging infrastructure. In the end, this singular project achieves 10 distinct goals stated in the Master Plan: improving visitor access and experience, increasing educational opportunities, enhancing the ecological function of Arboretum Creek, and providing better east-west connections through the Arboretum, to name a few.

The route begins at Madison Street to the south, sneaking behind the Stone Cottage and crossing a bridge just before Arboretum Drive. From there, the trail climbs the southern edge of the Pacific Connections Garden and leads down toward Azalea Way, passing through the future Chile and China eco-geographic forests. After crossing Azalea Way,



A rendering of the new trail crossing Arboretum Creek near the south end of Azalea Way. The trail will feature three new pedestrian bridges. (Illustration courtesy the Berger Partnership)



A cross section of the trail depicting its passage through the Gateway to Chile garden. (Illustration courtesy the Berger Partnership)

the route parallels Arboretum Creek, traversing a large wetland complex and meandering past Yew Hill and Honeysuckle Hill. The trail then connects just east of the Wilcox Bridge, avoiding several mature trees flanking the historic structure, to link up with Foster Island Road on its journey through the Oak Family collection to the Graham Visitor Center to the north.

Funding for the project's first phase was provided by the Washington State Department of Transportation as mitigation for impacts to the Arboretum caused by constructing the new SR 520 floating bridge. This phase, anticipated to be open to the public by late 2016/early 2017, will provide a mile and a half of a new paved trail, an expanded and improved Birch Parking Lot near Interlaken Boulevard, three new pedestrian bridges made of weathering steel, 20 new park benches (which will be available for dedication through the Arboretum Foundation's Memorial Bench Program), and improved access to the Graham Visitors Center, as well as new signage and enhanced way-finding. The new multi-use trail will connect to Arboretum Drive at its northern and southern termini, creating a continuous loop within the Arboretum, approximately two miles long—the "Arboretum Loop Trail"—and a great new way for visitors to experience the park.

A Trail for Pedestrians and Cyclists

As indicated in the Master Plan, the trail is intended to be multi-use. The design encourages slower speeds for cyclists to make the trail safe for other users. Bicycle speed will be slowed by curves that control sightlines and regulatory signage cautioning users of potential conflicts. A centerline stripe will help guide users around corners. The trail adds to two other nearby routes (Lake Washington Boulevard and the Lake Washington Bike Loop) commonly used by cyclists, and these routes will remain in place as the primary citywide and local trail connections for commuters and fast riders. Designed to work as part of this system, the Arboretum's trail gives preference to pedestrians and slower-paced recreational cyclists who are not comfortable riding in traffic along Lake Washington Boulevard.

Trail Specs

The trail surface will be asphalt, 10 feet wide, with two-foot crushed rock shoulders, giving it a total width of 14 feet. Due to site constraints, the trail width in some areas (such as behind the Stone Cottage) will be reduced to eight feet. Portions of the trail (mainly in the south end of the Arboretum) will have an eight-percent slope gradient or steeper, which may make them

inaccessible to some users. To comply with federal accessibility standards—while also balancing the need to preserve the Arboretum's historic landscape, buildings and plant collections—we have limited the number of these steeper trail segments. And to help accommodate accessibility, rest areas (benches with adjacent paved surfaces designed to fit a wheelchair, stroller or bike) will be provided every 400 feet along the length of the trail.

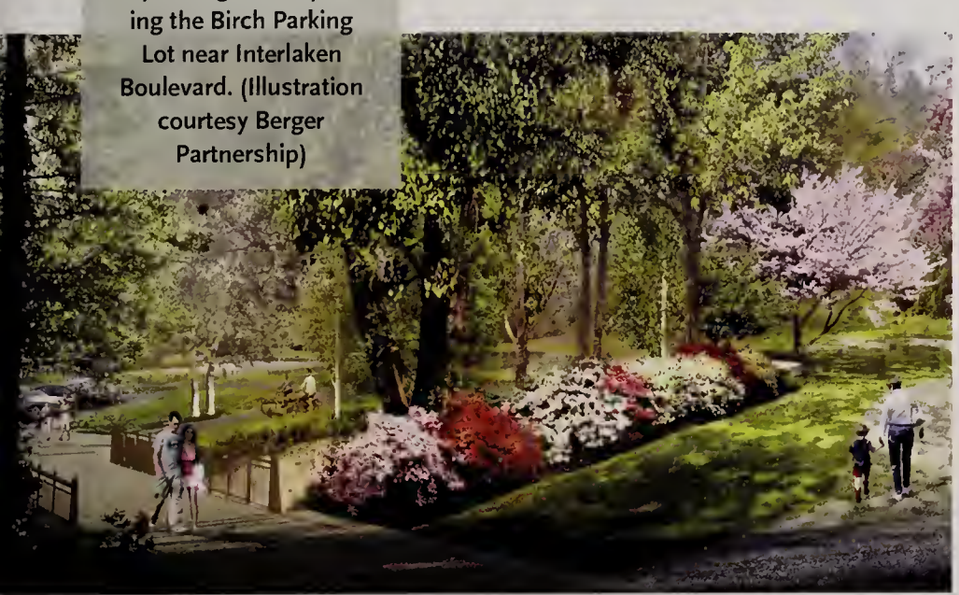
Several retaining walls will need to be constructed along the trail, where it cuts across steep slopes, in order to limit the amount of site disturbance and tree removal in those areas. The walls will be constructed of board-formed concrete (concrete patterned to look like wooden boards) that utilizes a pigment to dull the surface, making the finished product look original to the site.

New Connections, Collections and Access

Traveling parallel to Lake Washington Boulevard, the new trail will provide a north-south route through the Arboretum that will access a number of valuable plant collections currently off the beaten path. The project also will improve several much-needed east-west connections between the Arboretum and the surrounding neighborhood.

Visitors will enjoy a new route to explore collections such as the Birch and Poplars, Hawthorns, Larches, Ash Family, Walnut Family and Oak Family. Access to the Arboretum's mature Viburnum collection just south of Honeysuckle Hill will be a new spring highlight. In addition, Arboretum visitors will get to experience a riverine wetland environment previously inaccessible for a large portion of the year due to saturated soils (see "Environmental Benefits and Critical Areas" below). The project also will provide an opportunity to create new collection planting areas. Key areas will include portions of the future eco-geographic forests of Chile and China. Plants phased in as part of the trail project will begin the work of transforming these areas into immersive forests for each bio-region. Other selected plants will help screen the trail from the Japanese Garden.

Increasing connections and safety are two priorities of the new trail. One of the biggest improvements will be at Boyer Avenue East, where a new curb cut and pathway on the east side of Lake Washington Boulevard will allow for better access across the street, and will connect with an ADA accessible ramp that leads down and over a culvert at Arboretum Creek to the new trail. (Seattle Department of Transportation is proposing to install a three-way stop at the intersection of Boyer Ave and the Boulevard, but this is not part of our project.) Access from Foster Island Drive up to the Graham Visitors Center also will be greatly improved with a new stairway and ADA ramp giving pedestrians a safe north-south route. The intersection of Arboretum Drive East and Foster Island Road will be modified with a curb bulb and three-way stop to control vehicle speeds and allow safer pedestrian crossing. Creating an improved connection to the crosswalk from the Birch Parking Lot leading west of Lake Washington Boulevard to the Pinetum and Japanese Garden also will be part of the plan.



The trail project includes expanding and improving the Birch Parking Lot near Interlaken Boulevard. (Illustration courtesy Berger Partnership)

Impact to Plant Collections

Design for the project involved an incredible amount of teamwork. Working together, the University

Markers for the future trail in the Flats, a riverine wetland that's inaccessible to visitors during much of the year.. (Photo by Niall Dunne)

of Washington Botanic Gardens, Seattle Parks and Recreation, and the Arboretum Foundation carefully reviewed the trail route from numerous aspects. Laying out the trail involved the analysis of several different route options, wherein each route variation was identified on a site survey and then staked in the field to verify impacts to existing trees and other living collections. More than 2300 plants adjacent to the route were analyzed for potential impacts. In several areas, the trail alignment was shifted multiple times and resurveyed in the field to work around trees that were too large to move, or trees that provided important context to historic structures (see "Historic Landscapes" below) or a backdrop screening the trail from Lake Washington Boulevard. Once the route was settled, a spreadsheet was created by UW Botanic Gardens to identify how impacts to the collections would be handled.

Tree Transplants, Propagations, Removals and Trail Rerouting

The first criteria on the spreadsheet looked to see if a tree could be transplanted. Several factors limit moving woody plants, such as the large size of the specimen or tree, difficult site access, or a steep hillside. If a tree was determined too large to be moved, cuttings of the plant were taken to allow for propagation and replanting in the Arboretum. In a handful of locations, the trail was readjusted multiple times to save large trees. As a last resort, tree removals will be required in order to construct the trail. The trunks and stumps of several trees being removed will be utilized in creek restoration areas along Arboretum Creek.

Environmental Benefits and Critical Areas

Ecological function of Arboretum Creek will be greatly improved from the headwaters at the south end of Azalea Way. Three earthen berm culverts will be removed and the channel reworked to return portions of the creek to its original character. And as mentioned, several trees being removed for trail construction will be placed to provide habitat and stabilization for the new creek channel. A massive river birch that grew over a culvert pipe will be preserved in order to reduce visual impacts to the area.

A series of rain gardens in the expanded Birch Parking Lot will filter out water impurities and

A bermed trail will allow visitors to experience the Flats and its surrounding plant collections, while preserving the wetland's ecological function. (Illustration courtesy the Berger Partnership)

slow the release of runoff into Arboretum Creek. Three catch basins along Lake Washington Boulevard will be rechanneled into bio-filtration swales to treat water before it enters the creek. This also will reduce the perennial issue of having to close the boulevard to clear leaves and debris from the catch basins.

In an area known as the Flats, just north of the Birch Parking Lot, the trail will travel through a riverine wetland adjacent to Arboretum Creek. Trail construction through this segment will be unique in that the trail profile will be raised. Small culverts placed at frequent intervals under the bermed trail will allow critters and water to move freely through this sloping wetland.

Currently, ivy and other invasive plants grow rampant along the creek. Trail construction will allow for many of these weedy sections to be restored. A large percentage of the trail restoration planting will consist of a diverse native plant mix, particularly in the areas that traverse through the wetlands in the Flats and along Arboretum Creek.

Historic Landscapes

Lake Washington Boulevard and Azalea Way are historic landscapes designed by the Olmsted Brothers that go back to 1903 and 1936, respectively, and the project team worked hard to maintain the original design intent of how these features are sited in the landscape. Trail design limited visual impact to major historic structures, such as the Stone Cottage and Wilcox Bridge, by preserving mature trees and vegetation. In the case of the Stone Cottage, new materials such as stone walls and steel guard railings will be crafted to look weathered and aged. In all cases, the trail has been designed to minimize and avoid significant impacts while improving access in these areas.

Conclusion

The Arboretum Loop Trail will be constructed in two phases over the coming two years and, if everything goes according to plan, open to the public in winter 2016–17. But this is only the beginning: A future phase will connect the trail to the University of Washington, when the full build out of SR 520 is complete, as part of the Arboretum's North Entry improvements. When fully implemented, the multi-use trail will travel for two miles along the east side of Lake Washington Boulevard—connecting cyclists and pedestrians to and from the UW campus, Montlake and University neighborhoods. It will also connect them (via the 520 Bridge) to the Eastside, where there'll be a regional link to Redmond. ~

Andy Mitton is a landscape architect and associate at the Berger Partnership, in Seattle. His projects include Phase 2 of the Pacific Connections Garden and the Arboretum's new multi-use trail.

Plant Answer Line

Q&A from the Miller Library's Plant Answer Line

Early Leafing Trees

By Laura Blumhagen and Rebecca Alexander

This regular column features Q&A selected and adapted from the Elisabeth C. Miller Library's Plant Answer Line program. If you'd like to ask a plant or gardening question of your own, please call (206) 897-5268 (UW Plant), send it via the library website (www.millerlibrary.org), or email directly to hortlib@uw.edu.

QUESTION: Can you direct me to a list of deciduous trees whose leaves generally emerge in early spring, or to a list of trees ranked in order of their leaf emergence? I know this will vary from year to year and from individual tree to individual tree—due to climate and genes—but if there is a list out there with a general sequenced time schedule, it would be a great tool for design.

ANSWER: Henry David Thoreau was an early American observer of the varying timing of leaf emergence, and his journals list leaf-out dates for the trees and shrubs he saw in Massachusetts in 1854. In fact, his data are now being used in climate change research. Though this subject hasn't often been explored from a garden design standpoint, the increased interest in climate change means that more information on phenology and the leafing out sequence is becoming available.

Richard Primack and his lab at Boston University have been monitoring phenological events (leafing out, leaf drop, flowering times) at the Arnold Arboretum and comparing them with data recorded by Thoreau and other naturalists in the area. One example: Thoreau noted the opened flowers of highbush blueberry on May 11, 1853, but in 2012 the flowers of this plant opened on April 1. Primack's new book, "Walden Warming: Climate Change Comes to Thoreau's Woods" (University of Chicago Press, 2014), documents and reflects upon these phenological changes. In an article Primack co-authored with Caroline Polgar, "Leaf-out Phenology of Temperate Woody Plants: From Trees to Ecosystems" ("New Phytologist," Volume 191, Issue 4, pages 926–941, September 2011), the authors note that "maples (*Acer* spp.), birches, alders (*Alnus* spp.), and poplars" tend to leaf out earlier, while "oaks, ashes (*Fraxinus* spp.), and hickories (*Carya* spp.)" are among the later-leafing trees.

The article, "Why Do Temperate Deciduous Trees Leaf Out at Different Times? Adaptation and

ABOVE LEFT: A Japanese maple leafing out in the Woodland Garden. (Photo by Niall Dunne)
ABOVE RIGHT: Early leafing on a striped maple. (Photo courtesy wildburlingtonblogspot.com)

Ecology of Forest Communities" ("The American Naturalist," December 1984, Martin J. Lechowicz), has a chart (p. 825) showing the tree species studied by the author leafing out in this order:

Acer rubrum
Populus tremuloides
Betula papyrifera
Sorbus americana
Acer saccharinum
Betula alleghaniensis
Ulmus americana
Tilia americana
Quercus macrocarpa
Fraxinus pennsylvanica
Populus grandidentata
Fraxinus nigra

A different chart on the same page compares 1980 and 1981 leaf-out dates, with *Populus tremuloides, P. balsamifera* and *Betula* species consistently leafing early, followed by *Acer* and *Prunus*, then *Fagus* and *Populus grandidentata*, then *Fraxinus* and *Tilia*, and finally *Carya* and *Juglans*.

Another resource that may give a broad sense of the leaf-out date of specific trees is "The Botanical Garden: Volume 1: Trees & Shrubs," by Roger Phillips and Martyn Rix (Firefly, 2002). The book presents photos of branch samples from many tree species, sometimes showing the young leaves in association with a date. But bear in mind that the authors reside in England, and the book is over 10 years old.

The U.S. Forest Service publication "The Silvics of North America" sometimes refers to leaf-out times in the "Life History" sections of each of its species profiles. The entire publication is available for free online at www.na.fs.fed.us/spfo/pubs/silvics_manual/table_of_contents.htm. You can also peruse our copy at the Miller Library. Of course, the flowering/leafing of each species varies across its range according to latitude, so it might be difficult to determine a general leafing-out order among them all.

Laura Blumhagen is an information specialist at the Miller Library, in the Center for Urban Horticulture (3501 NE 41st Street, Seattle).

Rebecca Alexander is the Plant Answer Line librarian at the Miller Library.

New Books *for* Pacific Northwest Gardeners

By Brian R. Thompson

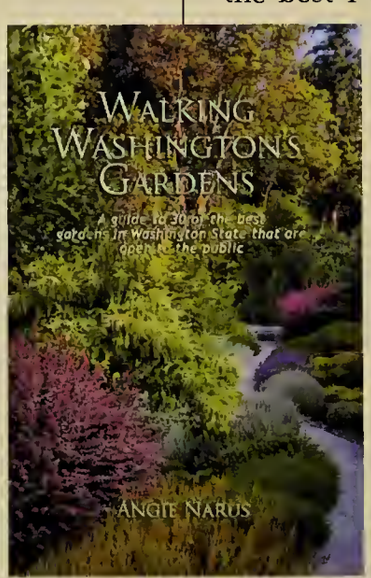
Garden Traveling in the Pacific Northwest

This is the year to go garden traveling in the Pacific Northwest—and two new books will guide your planning.

Donald Olson brings extensive experience as a writer of novels, plays and travel guides, along with his passion as a gardener to "The Pacific Northwest Garden Tour." He also brings the zeal of a convert. As a native Minnesotan and world traveler who now lives in Portland, he extols our gardens, our native landscapes, and our climate—yes, even the grey of winter.

The focus is on the three major metropolitan areas of the region: Seattle/Tacoma, Vancouver, B.C. and Portland, and this book is essential to consult for travel to any of these. Even as a nearly life-long Seattle area resident, I found out there are local treasures awaiting my discovery—including the Evergreen Arboretum and Gardens, in Everett; and the newer gardens of PowellsWood, in Federal Way, and Soos Creek, in Auburn.

Not in the mood to travel? This is still a book easily read cover-to-cover, especially for the history and the author's often witty turns-of-phrase—like how the Lake Wilderness Arboretum "...rescues old gardens that have lost their owners and moves them phlox, stock, and marrow to new digs at the arboretum," and how, at the Elisabeth Carey Miller Botanical Garden, it was "...Betty who wore the plants in the family."



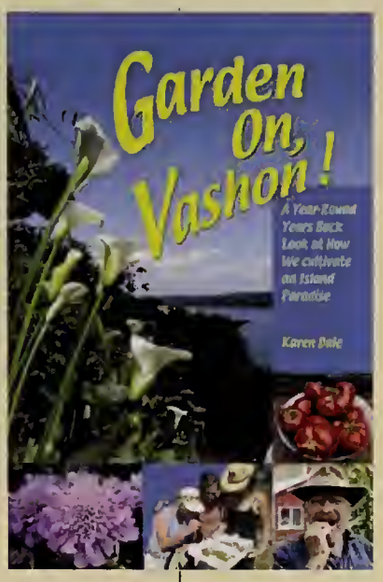
Like most garden tourists, I enjoy visiting destination nurseries, and many are included by Olson—especially those that have lavish display gardens. Of course, you'll read about the gardens and nurseries you know, but don't skip over the unfamiliar; I'm already thinking of a garden tour in the Portland area to share the author's special passion for several of his recommendations there.

Angie Narus brings a tremendous attention to detail in "Walking Washington's Gardens," which is the perfect size for keeping in the car for quick reference. She limits her scope to non-profit or public gardens in Washington and hopes her book "...encourages more people to not only visit gardens, but also join the effort to preserve them for the enjoyment of future generations."

Each garden narrative is supplemented with a page-length table of all the important facts, including nearby gardens and other attractions to batch together on your tour. She does the best I've seen of any "outsider" in understanding the scope of the University of Washington Botanic Gardens and its spread over two sites, the Washington Park Arboretum and the Center for Urban Horticulture.

The activities of each garden—including annual events, plant sales and education programs—are well documented, encouraging the reader to think of these gardens as year-round resources. For example, did you know that Meerkerk Gardens on Whidbey Island offers

a class on "fairy house-building" or that the Highline SeaTac Botanical Garden has an annual ice cream social? More immediate questions like "Can I have a picnic?" or "Do you have restrooms?" are also answered—much faster than any smart phone could.



Garden History on Vashon Island

"Garden On, Vashon!" is a most-intriguing book, and one that's hard to categorize. In some ways, it's a basic gardening book, tailored to the specific soils and microclimates of Vashon and Maury Islands. At the same time, author Karen Dale is telling the history of the islands from a ground-up perspective, beginning with the last ice age, but rapidly moving to the human history of the last 100 years or so.

She easily moves from history to present day, from accounts she has researched to her own style of memoir. The result is charming and recommends this book to readers of regional history as well as gardening. Throughout there are lots of gardening tips, such as when to plant for winter crops and when/how to prune your apples. Or not. "All over the Island these old apple trees stand—carpeted with green moss, shagged over with lichen and mistletoe, into their second century but still bearing fruit."

Vashon is famous for its history of fruit growing, with the Strawberry Festival a fixture of every July. Unfortunately, there are very few strawberries grown on the island anymore, even though the crop was a mainstay in 1909 when the Festival began. Why has this happened? This is a fascinating story, which this book addresses from a historical perspective, but also from the author's empirical efforts to understand the difficulties of growing a good crop of this luscious fruit.

The stories of island nurseries—such as the Beale Greenhouses, once one of the largest producers of cut-flower roses and orchids—are thoroughly documented, as is the Vashon Garden Tour. This latter chapter includes a lot of names, but even a casual read through shows how closely tied the island horticultural community was—and still is—to Seattle and the rest of the mainland.

Natives and Invasive Non-natives

Eileen Stark has a mission: to convince other gardeners of the Pacific Northwest to embrace the native plant palette in designing and planning our gardens. In this pursuit, she is not alone, but "Real Gardens Grow Natives" represents one of the most thorough efforts to review the benefits of regionally native plants, in combination with information on basic garden techniques and design principles. (She is a landscape designer in Portland.)

Stark is a realist, knowing that "...naturalistic, 'real' gardens aren't created overnight, and what will work best for your site may not be apparent right away." She discusses in great detail the ecology and habitat of native plants and the animals they support. While size does matter—"...many wild species have space requirements beyond our wildest dreams..." —she still encourages us to see our gardens, however small, as part of a larger system.

The last half of the book is an encyclopedia of recommended plants, divided by sunlight requirements. Within these categories, the author has organized her list alphabetically, so that a grand fir (*Abies grandis*) is only two entries before the wee nodding onion (*Allium cernuum*). While I found this odd at first, it forces you to consider the full range of scale for your garden, and to put nearly as much thought into your groundcovers as the trees and shrubs.

Each entry has the usual cultural requirements of any garden encyclopedia, but here you also will find the

environmental benefits of each—especially to wildlife and other typically associated natives. There also is a handy list of traditional garden plants that these natives can replace, while still providing the desired ornamental impact.

We all know that invasive, non-native plants are one of the biggest problems for the health of both our native plants and native animals. Sharon Kallis has come up with an interesting approach to dealing with these invaders: Weave them into art! She accurately describes her book, "Common Threads," as "... part philosophy and part toolkit."

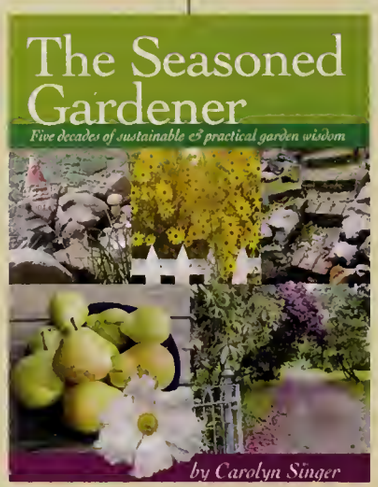
The toolkit is the easiest part for gardeners. An extensive technique chapter on making baskets, ropes, clothing, and other everyday necessities can be applied to many plants you have on hand. Kallis hopes that readers will apply her techniques to invasive plants wherever they live. Fortunately for us, she lives in Vancouver, B.C., and so her examples are easily found throughout this region.

The philosophy part of "Common Threads" more closely addresses the art community, encouraging the use of local materials as art supplies. She tells how her introduction to gardening was through a Means-of-Production garden, "...a place that artists could get involved and learn about where their materials came from [and] develop a seasonal awareness to material acquisition." She's also keen to help artists understand that resources are not limitless, by asking such questions as, "How many plants does it take to make the six cups of dye you might want for that project?"

A significant part of the book includes interviews with an interesting cross section of artists and managers of public spaces, including some with involvement in both arenas. She encourages artists to think of the value of creating impermanent art using plant materials, as well as the collective good of group art projects in public spaces, and art as a form of honoring and memorializing.

Gardening in the Focthills, Amongst the Deer

Grass Valley, California is on the outer rim of our region, but the gardening columns Carolyn Singer has written for her local paper are worth knowing about, especially for gardeners in the foothills of the Cascades. "The Seasoned Gardener" is a compilation of those columns and gives advice for areas with lots of rain and a wider temperature range than we have close to the Sound.



She also is very experienced with the ravages of deer and offers tips throughout on how to manage Bambi. A couple of older titles by Singer, recently acquired by the Miller Library, address this concern more directly. "Deer in My Garden" (2006, with much of the writing done while the author spent the summer of 2005 in Seattle) led to "Deer in My Garden: Volume 2" (2008)—the first emphasizing perennials and

Color in the Dunn Gardens

Donald Olson praises the 1915 Olmsted Brothers design of the Dunn Gardens, observing how the "essential Olmsted aesthetic remains intact" a century later. He notes that reds, purples and whites were favored in the design, while yellow was "severely frowned upon."

At the end of this Dunn Gardens entry, Olson mentions the newer Curators' Garden, tucked in behind the Visitor Center and created by co-curators Charles Price and Glen Withey "...using a bright, brilliant palette of plant color decidedly different from the muted tones favored by Olmsted Brothers. There's even yellow."

subshrubs, with the latter addressing groundcovers and edgers.

Both are part of "The Yucky Flower Series," honoring the advice of Singer's then three-year-old grandson: "The deer wouldn't eat yucky flowers!" So that is what she planted, and her deer-resistant recommendations are based on her own experience, or those of gardeners who grew trial plants for her, knowing that in the interest of science (or cervid consumer selection), the trial plants might disappear.

While yucky to deer, the selected plants are all quite lovely to gardeners and would make many other recommended plant lists. Most are drought tolerant and adapted to a wide temperature range. Best of all, the author enthusiastically rates the maintenance requirements of most as "EASY!" to "VERY, VERY EASY!" Deer or no deer, these are great garden plants. ~

Brian R. Thompson is the Manager and Curator of the Elisabeth C. Miller Library of the University of Washington Botanic Gardens. He is also a member of the "Bulletin" Editorial Board.

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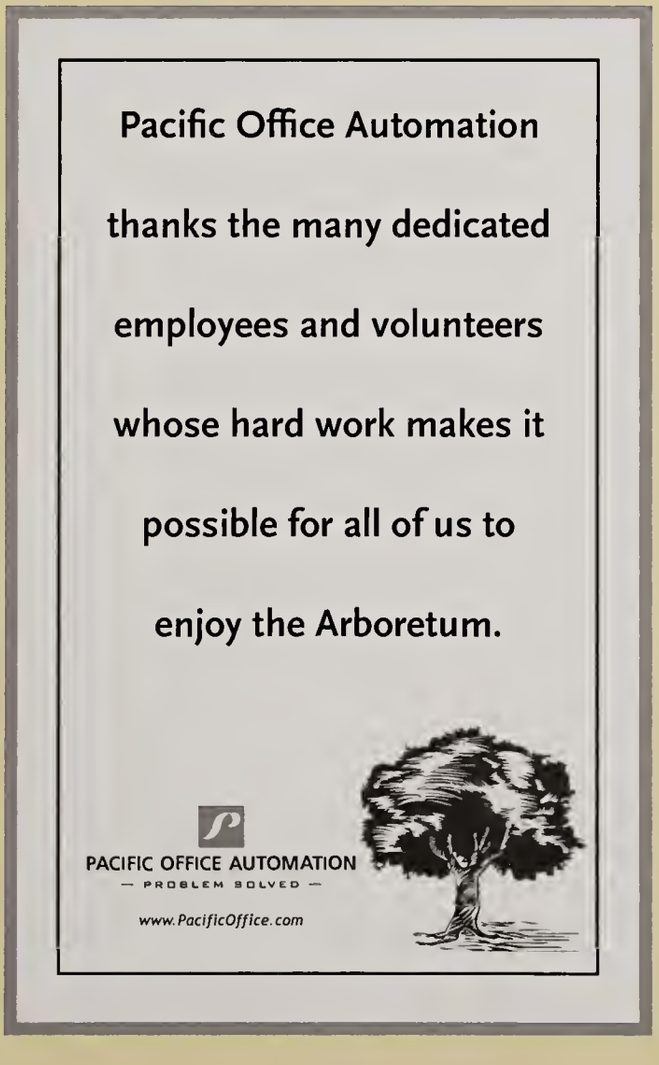

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